

ANNUAL REPORT
to the
GOVERNOR and GENERAL ASSEMBLY
on the
SOLID WASTE MANAGEMENT ACT OF 1991
Fiscal Year 2007-2008



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Division of Solid Waste Management
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Introduction

The Solid Waste Management Act of 1991 requires an annual report to be made on Tennessee's Solid Waste Management System (SWMS). The Department of Environment and Conservation (TDEC) Division of Solid Waste Management (SWM) and Office of Environmental Assistance (OEA) have collaborated to produce the 2007-08 Tennessee Solid Waste Management Annual Report. This document is submitted to the Governor and General Assembly as required by Tennessee Code Annotated (TCA) §68-211-873.

Tennessee's SWMS is intended to further the protection of public health and enhance the quality of the environment. Through the SWMS, TDEC acts as a facilitator for waste reduction by collaborating with county and municipal governments, industry and contract agencies. The goal is to coordinate the activities of these groups to maintain adequate health and safety standards, protect the environment through facility design and location, and maximize the utilization of resources that would otherwise be disposed at solid waste facilities

Overview& History

Concern for solid waste issues has been prevalent since the United States Congress enacted the Solid Waste Disposal Act of 1965. During the 1980s, public interest in solid waste management rose to new levels because of shrinking landfill capacity, increasing disposal costs, and opposition to the siting of new landfills. To address this, the Federal government enacted the Resource Conservation and Recovery Act. Subtitle D of this law provides regulatory exemptions and other incentives that encourage the reuse of recoverable material (United States Environmental Protection Agency, Office of Solid Waste, Communications, Information, & Resources Management Division [US EPA OSW CIRMD], 1998, p. II-1).

Coincidentally, in the late 1980s, local governments in Tennessee were faced with the expensive and often controversial challenge of finding environmentally safe disposal capacity for municipal solid waste. Lawmakers, public administrators, technical assistance providers, and industry collaborated to find a solution. The consensus was that long-range planning was essential for local governments to meet State and Federal mandates regarding modern, safe municipal solid waste disposal. The Act, a direct result of these discussions, placed as one of its major roles development of tools to help local governments, industry, and the public make better choices in dealing with solid waste issues (US EPA OSW CIRMD, 1998, p. II-2).

By 1995, the Environmental Protection Agency (EPA) had developed an integrated, hierarchical approach to waste management (US EPA OSW CIRMD, 1998, p. II-3). This was known as the "Integrated Solid Waste Management System." To mirror the waste management system established by EPA, TDEC developed its own SWMS. Tennessee's SWMS is intended to facilitate regulatory activities and enforcement by TDEC. The Act challenged each Region to reduce the amount of solid waste disposed in Class I landfills and incinerators by 25%. Originally, the Act set 1989 as the base year for calculation of the 25% solid waste reduction goal and December 31, 1995, was set as the date to meet the reduction goal (Solid Waste Management Act, Plan for Disposal Capacity & Waste Reduction, 1991).

The Act set forth specific provisions to further this waste reduction goal. One provision was the establishment of the Solid Waste Management Fund (the Fund). The Fund was established to provide financial support in addressing waste avoidance, waste reduction, recycling, composting, and household hazardous waste disposal. As identified by the General Assembly, education, technical assistance, and economic incentives are the tools to be used in support of this mission (Solid Waste Management Act, Solid Waste Management Fund, 1991).

Monies for the Fund are generated from a \$0.90 surcharge assessed on every ton of municipal solid waste disposed in Tennessee's Class I landfills or incinerators. Amendments in 2007 extended the surcharge and increased it from the previous rate of \$0.75 cents per ton to the existing \$0.90 per ton. In addition to the disposal surcharge going to the Fund, retail tire dealers collect a pre-disposal fee for each new tire sold in Tennessee. Amendments in 2007 increased this amount from \$1.00 per tire to the current rate of \$1.35. Tire dealers continue to keep 10 cents per tire to cover administrative costs. The remaining \$1.25 is remitted to the Department of Revenue to be deposited into the Fund (Solid Waste Management Act, Expenditure of Revenues, 1991).

The Act was amended in 1999 and established December 31, 2003, as the date for Municipal Solid Waste Planning Regions (solid waste planning entities) to meet the 25% per capita (by weight) reduction and diversion goal for municipal solid waste (MSW) disposed in Class I landfills or incinerators. The 1999 amendment established 1995 as the new base year (Solid Waste Management Act, Solid Waste Reduction & Diversion Goal, 1991). Additionally, the 1999 amendment allowed for the economic growth of a region to be used as one factor in determining compliance with the 2003 goal (Solid Waste Management Act, Basis for Goal, 1991). Each Region that did not meet the December 31, 2003 deadline is required to have its solid waste program qualitatively assessed to determine if a "good faith" effort was made toward achieving the goal. Rules specifying the methodology to be used for the qualitative assessment of regional solid waste programs were fully promulgated August 6, 2006. The first qualitative assessments are expected to be complete in the winter of FY 2008-09.

Amendments to the Act in 2007 deleted the December 31, 2003 deadline for meeting the 25% waste reduction and diversion making it an on-going goal. These amendments added a requirement for the regional solid waste plans to include a management plan for disaster debris; clarified sanctions for noncompliance with submittals of regional solid waste plans and updates; added language allowing TDEC to award grants for establishment of permanent household hazardous waste collection sites to municipalities or counties with large populations or high participation at the mobile events; added language that provide for grants to counties or municipalities that own and previously operated old closed landfills without composite liners causing harm to the environment through groundwater contamination; allowed for the Fund to be used for proper disposal of hazardous waste from K-12 schools; increased the tipping fee surcharge as noted previously; and allowed for a thorough review of the waste reduction and diversion goal to consider incentives and disincentives to promote recycling and waste reduction. Certain other housekeeping changes were also included in these amendments.

Waste Reduction Task Force

Upon approval of amendments to the Act, the Department requested that the Solid Waste Advisory Committee begin a review and make recommendations to update the State's waste reduction goal and identify waste reduction practices the State should implement.

In September 2007, the Solid Waste Advisory Committee, acting on amendments to the Solid Waste Management Act directing a review of the State's waste reduction and diversion goal, set up a twenty-three member task force comprised of solid waste professionals from across the state. The members of this task force included those representing local governments (solid waste directors, county and municipal mayors, aldermen, rural, urban, and large cities,) private industry representatives, the environmental sector, and the energy sector.

The Waste Reduction Task Force (or WRTF) was supported by a large group of technical assistance providers including the University of Tennessee's County Technical Assistance Service and the Center for Industrial Services, Recycling Marketing Cooperative for Tennessee, and several development districts. Various speakers and organizations were brought in to support and inform the WRTF in their discussion on the many topics reviewed. A professional facilitator was hired for the discussions and to make sure the objectives of the task force were met. Four work groups were further organized by the members of the WRTF to take an even closer look at the topics and make recommendations for action to the entire task force. An eighty (80%) percent consensus of the WRTF was set to move recommendations forward to the Solid Waste Advisory Committee.

Another bill approved in the 2007 legislative session directed the Department to enter into contract with Tennessee State University for a waste characterization study of waste going into Class I landfills and identification of methods of waste reduction. This work was to be undertaken with the final report to coincide with decisions from the WRTF.

The WRTF concluded its work in late May 2008 where it recommended sweeping waste reduction reforms that would bring the state more in line with its neighbors and to address the continued increased disposal rates across the state. The recommended reforms included a new waste reduction and recycling goal making everyone responsible for waste reduction, a series of landfill bans, redefinition of some current diversion methods as disposal, infrastructure improvements and monetary changes to tipping fees.

Upon receiving the recommendations, with little modification, the Solid Waste Advisory Committee, voted to recommend these reforms to the Department. Currently, the Department has drafted rules incorporating the recommendations of the Solid Waste Advisory Committee and will again present these to the Solid Waste Disposal Control Board for authorization to proceed with the rule making process.

Solid Waste Management System

The SWMS is a three-pronged approach to better manage Tennessee's solid waste. This includes providing and promoting technical assistance, education, and diversion/resource

recovery. These activities are advanced through the collaborative efforts among TDEC, educational institutions, private organizations, and agencies at all levels of government.

To assist the implementation of the SWMS, the Act made each county a Solid Waste Planning District (Solid Waste Management Act, Municipal Solid Waste Planning District, 1991). The Districts, in turn, were allowed to collaborate with local municipalities and neighboring counties to form MSW Regions (Solid Waste Management Act, Municipal Solid Waste Regions, 1991). The Act requires each MSW region to develop a 10-year disposal plan for their solid waste, provide for solid waste education to its population, and plan to reduce the amount of waste it generates by 25% (Solid Waste Management Act, Municipal Solid Waste Region Plans, 1991).

Along with the 10-year plans, regions must prepare 5-year updates and Annual Progress Reports (APRs) that project foreseeable solid waste disposal requirements and proposed solutions. Sixty-eight regional planning boards have the responsibility for developing the plans and for reporting this information to TDEC. The legislature amended the Act in 2004 to allow the APR to be used in lieu of the regional 5-year capacity update. Each region now uses its APR to project changes in solid waste generation and to modify its 10-year plan (Solid Waste Management Act, Municipal Solid Waste Region Plans, 1991).

To implement the SWMS, TDEC disperses monies from the Fund in the form of grants and contracted services. Grants are given to local governments, educational institutions, MSW Regions, and development districts to aid in solid waste planning. Grants are also available to county and local governments to assist in solid waste facility upgrades, purchase of recycling equipment, recycling of waste tires and collection of household hazardous waste at permanent facilities.

References

Solid Waste Management Act of 1991 [SWMA], Basis for Goal. §68-211-861(c). (LexisNexis 2001).

SWMA, Expenditure of revenues. §68-211-835(d). (LexisNexis 2001).

SWMA, Municipal solid waste planning district. §68-211-811(a). (LexisNexis 2001).

SWMA, Municipal solid waste region plans. §68-211-814(a). (LexisNexis 2001).

SWMA, Municipal solid waste regions. §68-211-813(a). (LexisNexis 2001).

SWMA, Plan for disposal capacity & waste reduction. §68-211-813(c). (LexisNexis 2001).

SWMA, Solid waste management fund. §68 211-821(a). (LexisNexis 2001).

SWMA, Solid waste reduction & diversion goal. §68-211-861(a). (LexisNexis 2001).

United States Environmental Protection Agency [US EPA], Office of Solid Waste, Communications, Information, & Resources Management Division. (1998).

Disposal

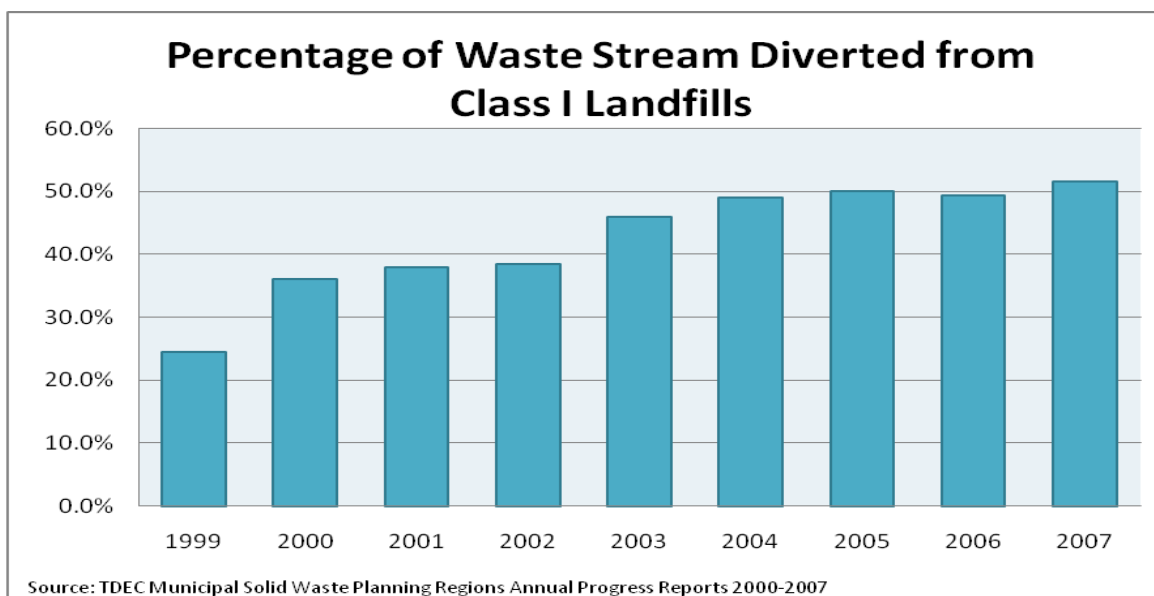
Tons of Class I Disposal Per Tennessean Per Year By County

Under the terms of the Solid Waste Management Act of 1991, municipal solid waste planning regions were required to reduce the amount of waste placed into Class I landfills by 25% from a base year measurement taken in 1995. Tennesseans generated 7,013,854 tons of solid waste in 1995, equal to 1.34 tons per person per year. In 2007, Tennesseans generated 14,056,132 tons of solid waste with 6,810,800 tons disposed of in Class I landfills and 7,245,332 tons recycled, reused, or diverted to other disposal facilities. This equates to a disposal rate of 1.11 tons per person. Using the 1995 base year, the per capita waste reduction and diversion rate for 2007 is 16%.

Regions that do not meet the solid waste reduction and diversion goal have their solid waste programs qualitatively assessed to determine if a “good faith” effort was made toward achieving the goal. Rules adopted by TDEC in late 2006 have established a method by which to assess under-performing Regions. These qualitative assessments are currently under review and are expected to be completed in the winter of FY 2008-09. Upon completion of these qualitative reviews, TDEC will make recommendations and provide assistance to help bring these regions towards compliance with the goal.

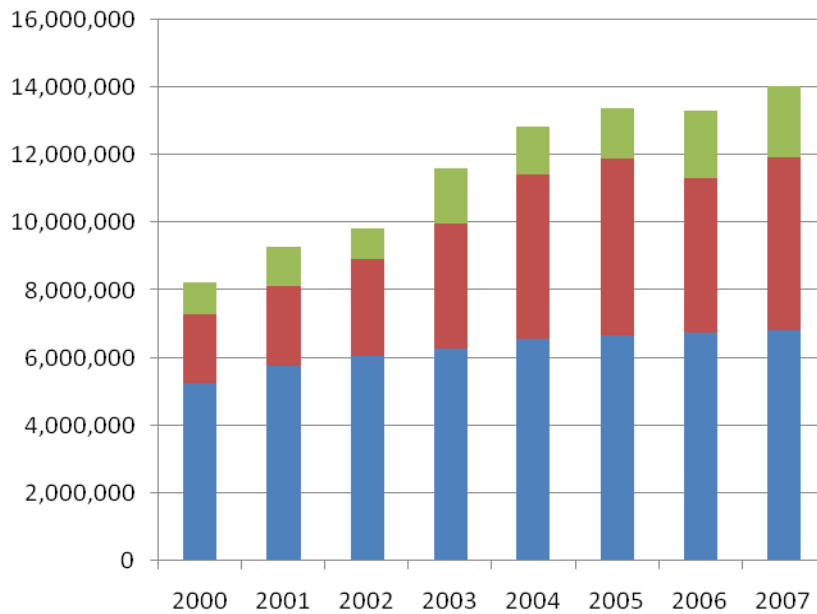
At the end of FY 2007-08, there were 35 permitted Class I (sanitary) landfills in Tennessee; 19 were publicly owned. There were 70 operating, permitted Class III and IV (construction & demolition) landfills. Approximately 2,133,512 tons of material was diverted away from Class I to Class III and IV landfills in calendar year 2007 according to the regions’ APRs. A total of 501 operating, permitted Convenience Centers are located throughout the state, most of which offer some level of recycling in addition to residential waste collection.

The following charts and tables summarize Tennessee’s waste stream from 2000-07.



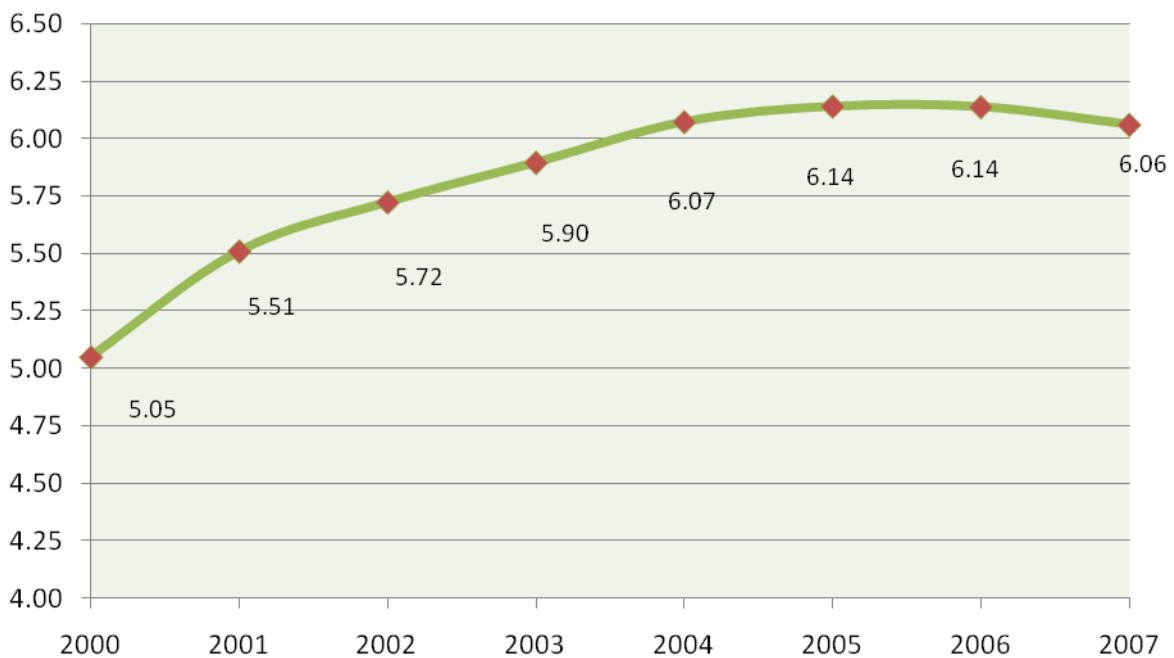
2000-2007 Total Generation in Tons

■ Class I Landfill Disposal ■ Public & Privately Reported Recycling ■ Class III/IV Landfill Disposal



Source: TDEC Municipal Solid Waste Planning Regions Annual Progress Reports 2000-2007

Pounds of Waste Placed in Class I Landfills by Tennesseans Per Capita Per Day 2000-2007 *



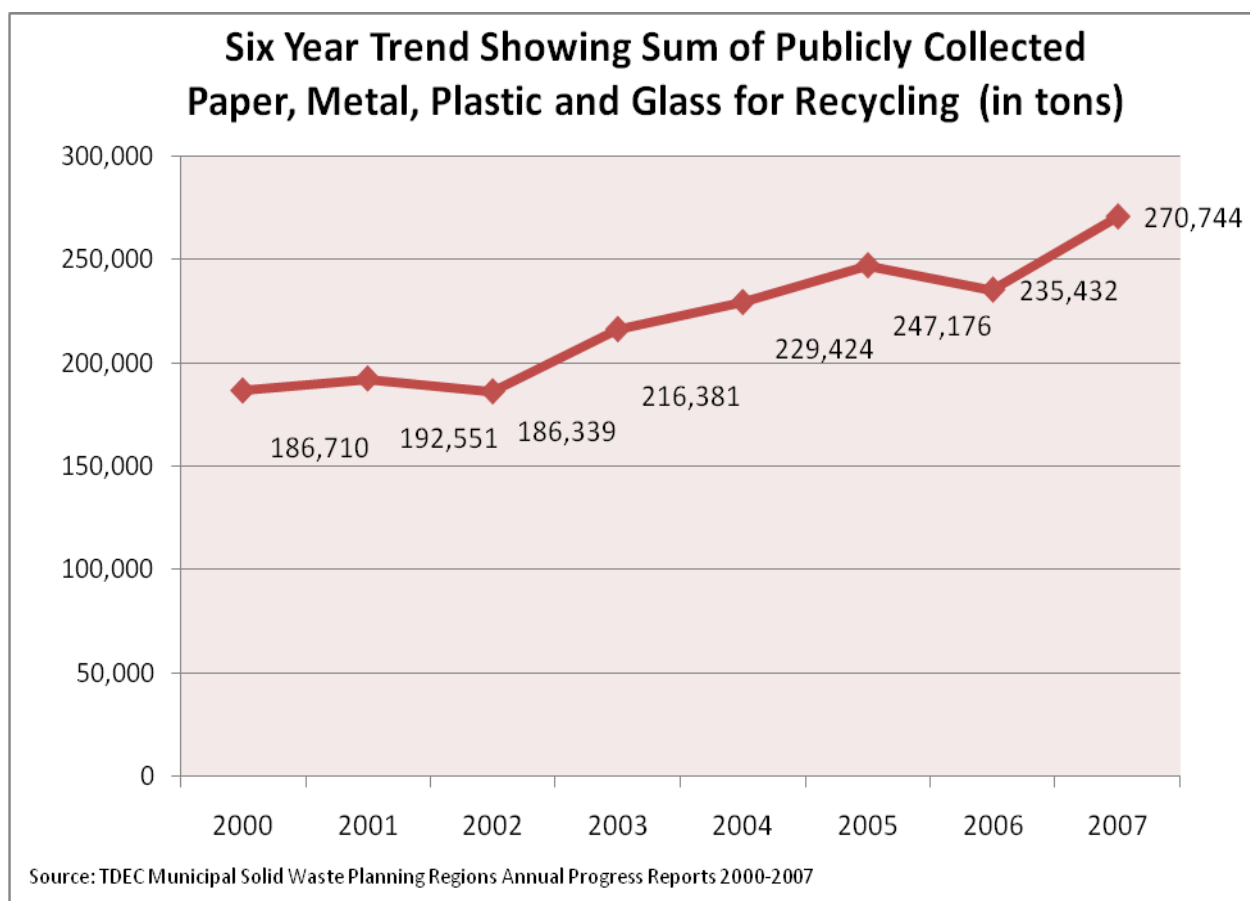
Source: TDEC Municipal Solid Waste Planning Regions Annual Progress Reports 2000-2007

Waste Diversion

The Solid Waste Management Act of 1991 provides a goal for which waste is to be diverted away from landfilling. Although there are many ways in which materials might be diverted and beneficially used; publically hosted recycling programs of post-consumer goods are most often collected for benchmarking of programs and for national comparisons.

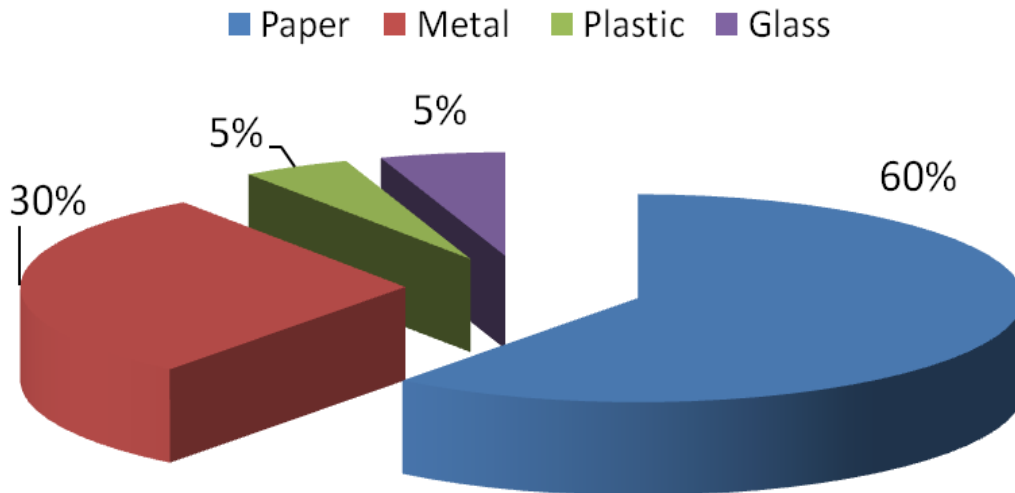
Through the use of APR's, each region's waste diversion efforts are measured. Most waste reduction efforts are reported through utilization of County Recycling Reports which are categorized as either public or private. For the sake of benchmarking, the following charts outline the post-consumer recycling efforts across the state for paper, metal, glass and plastic.

Paper, metal, glass, and plastic recycling is offered to residents and businesses throughout the state through various public collection programs operated or contracted through municipal or county governments.



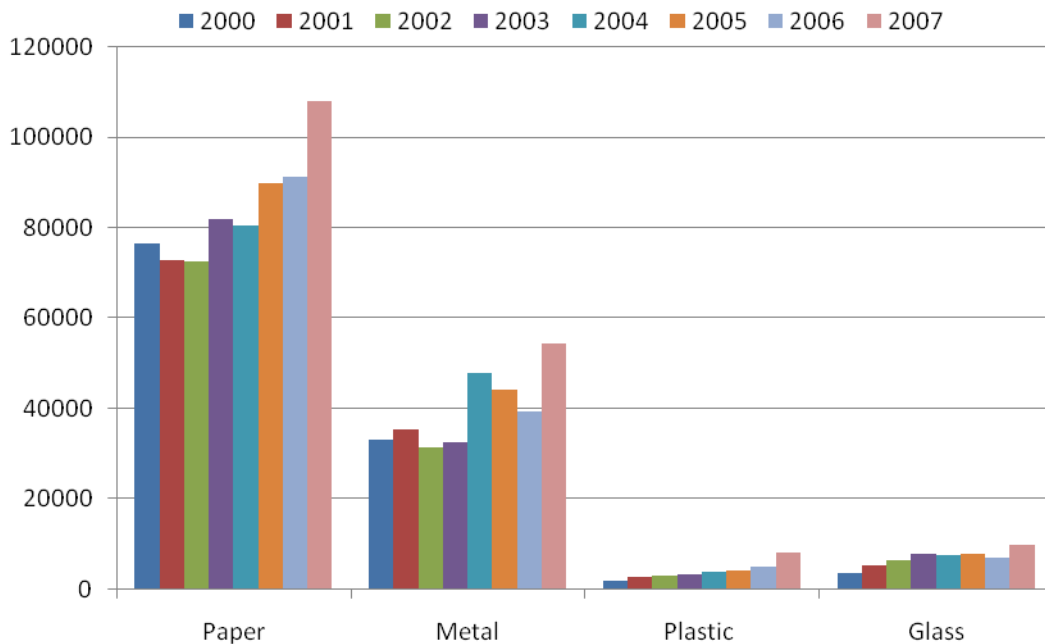
Commodities Recycled in 2007 by Weight

excluding Commercial and Industrial in-house programs



Source: 2007 TDEC Municipal Solid Waste Planning Regions Annual Progress Report

Residential Commodities Recycled By Year (2000-2007) (In Tons)



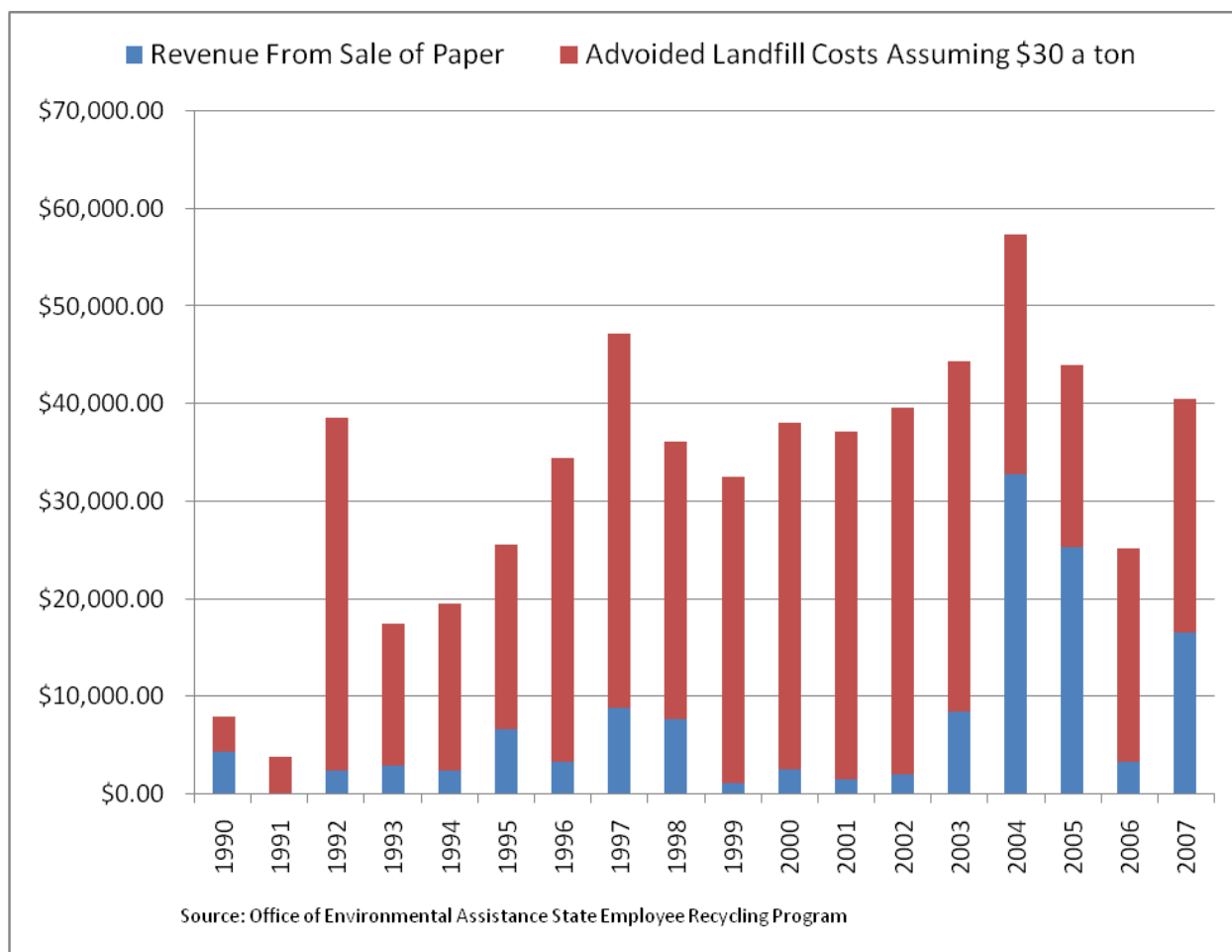
Source: TDEC Municipal Solid Waste Planning Regions Annual Progress Reports 2000-2007

Office of Environmental Assistance Programs

The State Employees Recycling Program

The State Employees Recycling Program (SERP) administered by the Office of Environmental Assistance (OEA), includes more than 24,532 state employees in 114 facilities. The State Employee Recycling Program has partnered to include the cities of Chattanooga, Jackson, Johnson City, Knoxville, Memphis, Nashville, Cookeville, Columbia, Jamestown, and Oak Ridge.

From January 1, 1990 to December 31, 2007 state employees recycled 15,245.5 tons of mixed office paper. This produced revenue of \$132,621.88 for the state, while avoiding \$455,572.00 in landfill disposal costs. These revenues are deposited in the Solid Waste Management Fund to purchase new equipment for the program.



State Parks Recycling Program

Currently 75 percent of the Tennessee State Park system has viable recycling programs in place, offering recycling opportunities to both staff and visitors. Recycling at the parks is accomplished through partnerships between the parks, SERP, and the local solid waste agencies. The SERP's key role was to provide technical and financial resources and the local programs provided options for recycling the materials. A few parks are serviced by the SERP contractor. A limited number of parks work directly with private vendors to generate revenue for the recyclable materials. The 2008 Seasonal Interpretive Recreation Program adopted recycling as a key project, working to invigorate existing programs and add recycling to parks without programs.

Tennessee Solid Waste Education Project

Tennessee Solid Waste Education Project (TNSWEP) is an educational project supported by the Fund and designed to help Tennessee students, teachers and local officials understand issues about solid waste management, source reduction, recycling, natural resource conservation, and environmental protection.

Since 1995, TNSWEP has provided consulting services, education materials, and training for K-12 teachers and students statewide. The staff coordinates TNSWEP services with TDEC's Green Schools program, and discusses opportunities and needs for incorporating activities relating to the solid waste component of the Tennessee Pollution Prevention Partnership.

In FY 2007-08, TNSWEP staff made 354 classroom presentations, and conducted 17 in-service trainings and curriculum workshop sessions for teachers and other solid waste educators. TNSWEP educated pre-service teachers at Tusculum College, Union University, and the University of Memphis on TNSWEP curriculum activities for the classroom. TNSWEP also had more than 154 consultations with schools on the Green Schools and the School Chemical Cleanout programs.

Other notable initiatives included:

- Participating in Project Learning Tree, Project WET and Flying Wild workshops with CENTS program
- Expansion of TNSWEP contacts through coordination with the Math-Science Partnership initiative
- Presentations to 986 students and 77 teachers during Crockett and Humphreys County Ag Days
- Presentations to 1,852 elementary student and 99 teachers during Bedford Co. Environmental Awareness Week.

School Chemical Cleanout Campaign

The Office of Environmental Assistance's (OEA) School Chemical Cleanout Campaign (SC3) is a cooperative effort between the Tennessee Department of Environment and Conservation (TDEC) and Department of Education. It has received support from the Tennessee Organization of School Superintendents, Tennessee Science Teachers Association, and Tennessee Academy of Science. Major grant funding came from the US Environmental Protection Agency Programs of Pollution Prevention and Solid Waste Management.

This opportunity is offered under the umbrella of TDEC's Green Schools Program. TDEC staff researched and developed the SC3 project to clean out legacy chemicals from K-12 public and private schools in Tennessee. The management team is composed of staff from the Office of Environmental Assistance.

The primary goals are:

- To inventory and remove potentially dangerous legacy chemicals from schools.
- To conduct follow-up educational workshops for teachers on safe chemical management, lab safety regulations, and chemical waste disposal.
- To avoid future needs for a disposal program by encouraging Green Chemistry that uses less hazardous materials and Microchemistry in Tennessee K-12 schools.

The program has produced very successful results. By coordinating school cleanouts with TDEC's county Household Hazardous Waste (HHW) collections, disposal costs have been minimized. Schools submit an inventory or photos of unwanted chemicals, and then OEA and the HHW contractor segregate, pack and ship for proper disposal. The majority of the waste is incinerated in a hazardous waste incinerator. All mercury is recycled into new uses.

During the FY 2007-08, twenty-eight schools which entailed 17,601 students and teachers removed 7,434 pounds of legacy chemicals including 177 pounds of mercury and an estimated 3,534 pounds of formaldehyde.

Since its inception, the SC3 program has removed a total of 38,941 pounds of hazardous laboratory waste including 806 pounds of mercury and an estimated 11,678 pounds of formaldehyde in 153 schools.

Technical Assistance

Development Districts

The development districts were established to assist local governments with planning and development services while also serving as a forum for local governments to solve common problems associated with economic development, environmental planning and community growth. The districts assist local governments to plan for the future by coordinating the establishment of regional and local priorities. In 1966, the Tennessee General Assembly passed legislation establishing the development district network across Tennessee. There are 9 development districts serving all of Tennessee's 95 counties.

In FY 2007-08 development districts gave support to local governments on solid waste management planning covering a wide-range of issues. Development districts assisted in compiling data that was used in the preparation of many region's APRs. Districts gave assistance to forty-five counties by preparing thirty-six APR's for their regions in FY 2007-08. In addition to the APR process, districts continued to maintain regional solid waste plans and developed fourteen District Needs Assessments for counties not meeting the 25% waste reduction and diversion goal or that were used as comparative regions for qualitative assessment as outlined in the solid waste management rules and the Solid Waste Management Act.

Other projects or activities completed by districts include:

- Assisted twenty regional solid waste planning boards, representing 32 counties, with on-going solid waste activities.
- Prepared convenience center permitting documents.
- Assisted with establishing recycling centers and expanding other waste reduction programs for several communities.
- Completed a survey and report of solid waste infrastructure needs in Tennessee
- Evaluated solid waste disposal and energy costs for local government.
- Assisted with landfill expansion project.
- Provided research and support for tire recycling programs across the State.
- Assisted counties with establishing waste reduction programs and identifying diversion options for specific solid wastes.
- Assisted local governments with the preparation and administration of 35 solid waste management grants.

Recycling Marketing Cooperative for Tennessee

The Recycling Marketing Cooperative for Tennessee (RMCT) is a nonprofit organization established in 1993 whose mission is to market Tennessee's recyclables through community cooperation and education. TDEC contracts with RMCT to help cities and counties market recyclables and provide assistance with program development, grant writing, and logistical planning. As the only statewide cooperative in Tennessee, RMCT benefits the Department by fulfilling the responsibilities of the Office of Cooperative Marketing under Section 68-211-826 of the 1991 Solid Waste Management Act. RMCT seeks the most cost effective markets for

recyclables and combines materials from small recycling programs and larger programs to minimize transportation costs and maximize recycling monetary income.

During FY 2007-08, RMCT helped local solid waste programs market more than 7,690.15 tons of recyclable materials and collected over \$853,523 for those programs. By diverting recyclable materials from the waste stream and eliminating landfill costs, RMCT efforts saved local solid waste programs over \$984,330. During FY 2007-08, RMCT also provided assistance to 46 counties and 4 cities across Tennessee in marketing materials. RMCT helped multiple communities set up recycling programs and write grants. RMCT's goal beginning in FY 2006-07 was to provide free electronic scrap recycling. This program has proven very successful diverting 1,080.85 tons of e-scrap in FY 2007-08 saving the state \$756,580 in avoided costs to the mobile household hazardous waste program. This program is designed to lessen the growing impact of electronics on TDEC's mobile household hazardous waste collection events.

University of Tennessee-Center for Industrial Services

TDEC contracts with the University of Tennessee Center for Industrial Services (CIS) to provide Tennessee industry with technical assistance on waste identification and reduction. CIS maintains a web-based reduction information clearinghouse and provides training, workshops, and assistance related to waste managing, planning, and reduction. The Tennessee Materials Exchange (TME) and the Recycling Markets Directory (RMD) are two of the programs maintained by CIS to benefit Tennessee industry.

TME is a free service assisting industry in finding markets for by-products, surplus materials, and wastes. It promotes beneficial use of material resources, especially those considered wastes and otherwise destined for disposal. TME lists materials available and materials needed and serves as an intermediary between the two. The TME listing is updated monthly on their [website](#).

The RMD is an Internet based database of companies that actively recycle materials generated in Tennessee (companies with expansion plans are not listed until in-state facilities are operational). The [website](#) is searchable by company name, by company location, or by types of material purchased. The database is constantly evolving and requires regular updates. During FY 2007-08, CIS updated the TME and the RMD and began using new software to track new subscribers.

The University of Tennessee-County Technical Assistance Service

TDEC contracts with the University of Tennessee County Technical Assistance Service (CTAS) to provide technical assistance to local governments by providing technical documents, and consultative services. In addition to assisting and advising these authorities on up-grading and maintaining their solid waste collection systems, including convenience centers, transfer stations, and systems used in waste reduction, recycling, and disposal, CTAS also develops and offers courses and workshops on solid waste management, source reduction, and recycling for continuing education and training for local government officials.

During FY 2007-08, CTAS assisted counties, municipalities, solid waste authorities and regions by providing technical assistance specific to their needs. Significant projects included: assisting Cumberland County with implementation of transfer station project, assisting Grainger County with development of an RFP for collection of waste, and assisting Greene County with an overhaul of their existing waste collection system. Also, CTAS developed a script for a training DVD for convenience center operators that is currently under production. The CTAS consultants provide valuable technical assistance in the design and operation of the local solid waste systems offering improvements and best management practices collected from statewide visits with other local governments. CTAS continues to provide local governments with sample ordinances, procedural handbooks, and contracts to assist them in properly incorporating solid waste activities into their local laws and community operations.

Problem Waste Management

Household Hazardous Waste

The household hazardous waste (HHW) mobile collection service provided by the state to the counties continues to be a valuable component of an integrated solid waste management program. Improper storage and disposal of HHW is unsafe for the public, sanitation workers, and the environment. The program provides convenient disposal in the county at no charge to residents that lack the means to dispose of hazardous materials available to businesses and institutions. Ninety-four counties have participated in the HHW mobile collection service since the program's inception in 1993. SWM continues to provide up to four events each Saturday during the collection "season." Clean Harbors Environmental Services, Inc. is the state's contractor for the mobile collection service and has the contract until July 31, 2009.

In FY 2007-08, there were 46 one-day HHW events and three "milk runs" to pick up pre-collected paint. The collection program received a variety of wastes including flammable liquids, corrosives, oxidizers, elemental mercury, electronics, batteries, pesticides and paint. The service was utilized by 20,237 households that were able to properly dispose of 1,432,291 pounds of household hazardous waste. An average for all of the events was 30,863 pounds of HHW, at an average cost of \$19,777 per event. The total cost for the 46 rural county sweeps and three "milk runs" was \$919,814.64 resulting in an overall cost per pound of \$0.64 and an overall cost per household of \$45.45. Appendix A presents data for the FY 2007-08 HHW mobile collection service.

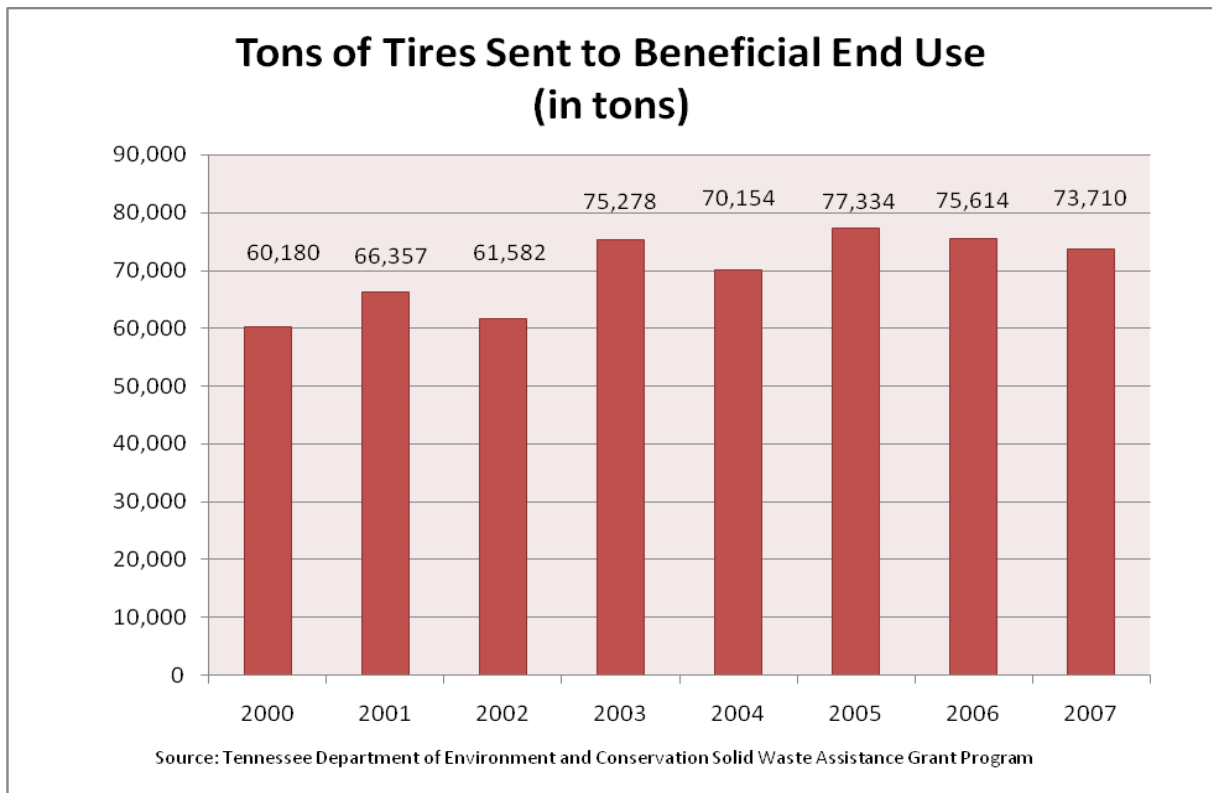
Chattanooga, Knoxville, Nashville, and Shelby County have permanent HHW collection facilities and are not included in these calculations. These facilities were constructed with grants from the Solid Waste Management Fund, as provided in the SWMA [TCA §68-21-828].

Waste Tire Recycling

In 1999, the Act was amended to prohibit counties from placing shredded tires in landfills after July 1, 2002, if the net cost of shredding, transporting, and disposing of waste tires exceeded the

cost of an available beneficial end use. Beneficial end uses for scrap tires include cement manufacturing, tire-derived fuel (TDF), and civil engineering applications. FY 2001-02 was the last year that a statewide shredding service was provided to counties. All 95 Tennessee counties now send their tires to beneficial end users. Grants are available to assist counties in this effort. In FY 2007-08, counties recycled a total of 59,433 tons of tires with the assistance of grant funds. Total tires recycled in FY 2007-08 are 73,710 tons as submitted by local governments in the APR.

TDEC also maintains a list of unpermitted waste tire disposal sites. This list is prioritized to identify those sites that may pose a threat to human health. For instance, rainwater trapped in tires can become a breeding area for mosquitoes. The potential presence of West Nile virus within proximity of the public is of great concern at the unpermitted waste tire sites. The new Waste Tire Cleanup Grant was developed to assist counties with clean up and remediation of unpermitted waste tire disposal sites. Utilizing these grant funds, counties are solicited to clean up legacy unpermitted waste tire sites. The county may contract to clean up sites and receive reimbursement for one hundred percent of eligible costs. This grant was used to clean up sites in Greene, Johnson, Marion and Smith counties in FY 2007-08 totaling 137 tons of tires. A list of sites is maintained and the goal is to eliminate all of the sites that are practical to clean up. Any new unpermitted waste tire sites are cleaned up utilizing the enforcement procedures in the law.



Assistance Grants

Since 1992, financial assistance has been provided for solid waste initiatives to Tennessee's local governments and non-profits. In that time, over 3,200 grants have been awarded at over \$95 million dollars for various projects ranging from key pieces of recycling equipment purchases to large facility improvements like the building of material recovery facilities (MRFs), addition of truck scales, and building of convenience centers. Monies for these grants come from the Fund.

Solid waste grant assistance has allowed the 68 solid waste planning regions to build much needed infrastructure. A decade ago, green boxes or unmanned county waste receptacles, dotted the back roads of our highways. At that time anything and everything was tossed in and around these containers. Today, 93 of 95 counties have at least one convenience center which is monitored and fenced. These centers provide drop off points for MSW as well as assorted recyclables. The vast majority of Tennesseans have an integrated solid waste system to manage their local MSW as a result of these solid waste grants.

In addition to grants designated for the local governments and non-profits, the grant program also provides grants to the State's development districts, the University of Tennessee Center for Industrial Services, University of Tennessee County Technical Assistance Service, and the Recycling Marketing Cooperative for Tennessee (RMCT) to provide technical assistance to the local governments.

Recycling Equipment Grant

The recycling equipment grant is an excellent way for local governments and non-profit organizations to purchase key pieces of recycling equipment. Items traditionally purchased under this grant include: roll off containers, skid loaders, paper shredders, scales, balers, glass crushers, and assorted styles of collection containers. This grant is competitive with a maximum award of \$25,000. A matching share of 10%-50% is required and is determined using an economic index. In FY 2007-08 eighteen counties, one city, and one non-profit organization received recycling grants totaling \$356,272 as outline in Appendix B. Counties and municipalities eligible for the recycling rebate are not eligible for this grant offering.

Recycling Rebates

Each year the top eleven county generators of MSW are offered recycling rebates which may be used for any recycling purpose including establishing, maintaining or expanding recycling operations and systems or providing education for local recycling programs. Municipalities are offered a portion of the rebate for their programs. The municipalities may allow their portion to be deferred to the county. There is a one to one matching of funds for this rebate. These awards totaling \$586,555 are detailed in Appendix C.

Waste Tire Recycling Grants

The Division of Solid Waste Management provides grants to counties to assist with the collection and recycling of their waste tires. These awards are detailed in Appendix D.

In June 1995, TDEC initiated the Waste Tire Recycling Grant Program to assist counties in locating, collecting, and properly disposing waste tires with beneficial end use being the ultimate goal. Grants are awarded based on total annual payments to the Department of Revenue by the county's tire dealers. Each county's reimbursement is paid on its eligible tire generation at a rate of \$70.00 per ton.

In FY 2007-08, TDEC gave eighty-nine counties grants for the location, collection, and approved beneficial end-use of tires. TDEC reimbursed counties \$4,160,297 through the Waste Tire Grant Program. The participating grantees collected 59,433 tons or 5,943,300 passenger tire equivalents and processed them to beneficial end use.

Waste Tire Cleanup

The waste tire cleanup grant is designed to assist local governments in the cleanup of unpermitted waste tire sites. Eligibility for this grant is determined on a priority basis. This grant does not require a matching share. Grants are awarded to counties to contract for services to mitigate unpermitted waste tire sites, provide for equipment rentals, labor needs, access to site and other activities related to the mitigation.

The number of grants annually is limited by the availability of funds after prioritization. In FY 2007-08, four priority unpermitted waste tire sites were cleaned up at a cost of \$71,000 for 137.19 tons of tires.

Development Districts

Each year the Department contracts with development districts to provide technical assistance for solid waste planning. The districts prepare and submit work plans that outline technical assistance for the regions in their district. In FY 2007-08 the Department contracted with eight development districts for \$455,757 to provide quality technical assistance services. This is a non-matching grant.

Operation and Maintenance Grants for Permanent HHW Collection Facility

In FY 2006-07, the City of Memphis, in cooperation with Shelby County, received a \$500,000 grant to fund the construction and start-up of a permanent household hazardous waste collection site. Shelby County broke ground on the facility July 31, 2006 and on November 27, 2007 the facility was officially opened to accept household hazardous wastes, such as cleaning chemicals and pesticides, for safe disposal.

The new Shelby County facility is located at 6305 Haley Road, Memphis. This is the fourth such facility in Tennessee. Chattanooga, Knoxville and Nashville also have permanent household hazardous waste collection sites. After the initial grant for construction and start-up, the permanent sites apply each year for grants to cover a portion of their ongoing operational costs. This year, each of the three existing facilities received an \$85,000 grant toward those costs.

University of Tennessee County Technical Assistance Service (UT-CTAS)

The University of Tennessee County Technical Assistance Service grant is a yearly non-competitive grant. In FY 2007-08 CTAS received a grant for \$341,095 for technical assistance to local governments. Activities funded by this grant directly provide for assistance to local governments in designing facility layout, determining appropriate equipment specifications, best management practices development, GIS mapping and route design to name a few. Additional value added services from CTAS also includes legal assistance in solid waste matters, research assistance on solid waste topics and technical support at public meetings. This grant currently also supports a technical blog for solid waste professionals in local governments in Tennessee and offers a valuable resource for other professionals across the country.

University of Tennessee Center for Industrial Service (UT-CIS)

The University of Tennessee Center for Industrial Service grant is a yearly non-competitive grant. In FY 2007-08, CIS received a grant for \$247,000 for technical assistance to the business and industry sector. . This grant provides funding for the Tennessee Materials Exchange and the Recycling Markets Directory in addition to other technical assistance services and projects benefiting business and industry.

Tennessee State University

Pursuant to legislation passed in FY 2007-08, the Department contracted with Tennessee State University for \$99,900 to provide a waste characterization study and to offer suggestions on how the State of Tennessee could improve waste reduction efforts. The waste characterization report is due in late 2008. This report will support and complement the work of the Waste Reduction Task Force.

Appendix A: Mobile Household Hazardous Collection Summaries Fiscal Year

County	Participating Households	Participation Rate	Total Cost	Cost per Household	Total Pounds Collected
Anderson	500	1.73%	\$18,746.83	\$37.49	23,800
Bedford	280	1.66%	\$16,727.01	\$59.74	22,024
Bledsoe*	na	0.00%	\$1,362.11	na	3,500
Blount	894	1.93%	\$46,062.55	\$51.52	72,845
Bradley	690	1.87%	\$31,725.39	\$45.98	59,651
Cannon	84	1.57%	\$4,407.92	\$52.48	5,161
Coffee	332	1.63%	\$14,380.01	\$43.31	24,540
Cumberland	812	3.95%	\$23,756.40	\$29.26	37,973
Dickson	220	1.20%	\$14,594.80	\$66.34	22,960
Dyer	178	1.18%	\$7,328.98	\$41.17	12,173
Fentress	73	1.06%	\$5,497.89	\$75.31	8,818
Franklin	133	0.81%	\$8,328.30	\$62.62	8,573
Gibson	98	0.51%	\$4,754.49	\$48.52	9,147
Giles	195	1.66%	\$14,918.20	\$76.50	18,687
Greene	396	1.52%	\$24,348.00	\$61.48	33,610
Henry	161	1.28%	\$9,707.88	\$60.30	11,364
Humphreys	123	1.69%	\$5,814.45	\$47.27	7,268
Jefferson	195	1.01%	\$7,280.00	\$37.33	11,122
Johnson	79	1.09%	\$5,215.10	\$66.01	6,726
Lawrence	147	0.89%	\$8,695.94	\$59.16	16,454
Lincoln	87	0.67%	\$6,730.02	\$77.36	5,767
Loudon	444	2.56%	\$20,379.04	\$45.90	30,640
Madison	700	1.84%	\$27,944.24	\$39.92	49,560
Madison*	na	0.00%	\$6,020.12	na	2,732
Marshall	126	1.11%	\$8,141.44	\$64.61	9,031
Mauy	526	1.72%	\$31,842.66	\$60.54	59,931
McMinn**	261	1.27%	\$2,670.04	\$10.23	6,335
Monroe	206	1.19%	\$10,834.87	\$52.60	17,197
Montgomery	846	1.44%	\$31,923.77	\$37.73	33,775
Montgomery	838	1.42%	\$29,762.78	\$35.52	31,742
Obion	155	1.20%	\$7,283.98	\$46.99	12,409
Overton	55	0.67%	\$2,116.72	\$38.49	548
Putnam	634	2.38%	\$23,252.92	\$36.68	36,478
Roane	275	1.30%	\$13,671.10	\$49.71	22,949
Robertson	130	0.54%	\$12,064.41	\$92.80	18,257
Rutherford	1,528	1.75%	\$73,883.41	\$48.35	134,970
Sevier	386	1.22%	\$11,952.74	\$30.97	27,702
Stewart	80	1.54%	\$4,346.71	\$54.33	2,928
Sullivan	598	0.98%	\$35,485.48	\$59.34	51,204
Sullivan	256	0.42%	\$25,631.08	\$100.12	22,747
Sumner	405	0.70%	\$24,008.85	\$59.28	38,838
Tipton	220	0.98%	\$9,096.68	\$41.35	18,676
Trousdale	88	2.87%	\$4,441.45	\$50.47	8,263
Warren	351	2.21%	\$15,367.78	\$43.78	28,202
Washington	540	1.20%	\$30,074.69	\$55.69	55,698
Weakley	51	0.38%	\$3,237.38	\$63.48	4,516
Williamson	1,393	2.27%	\$55,118.84	\$39.57	81,296
Williamson	2289	3.73%	\$60,590.36	\$26.47	93,356
Wilson	1,179	2.93%	\$58,288.83	\$49.44	110,148
Total/Average	20,237	1.44%	\$919,814.64	\$45.45	1,432,291

* Milk run pickup for pre-collected paint.

** McMinn County hosted a BOPAE (Batteries, Oil, Paint, Antifreeze, Electronics) collection, which resulted in the collection of 20,350 pounds of minimally hazardous material. The state managed the disposal of the paint only, while the county and City of Athens managed the collection and recycling of all other materials.

Appendix B: Recycling Equipment Grant Expenditures Fiscal Year 2007-08

Anderson County	\$9,076.50
Cannon County	\$14,700.00
Carroll County	\$20,843.20
Claiborne County	\$25,000.00
Coffee County	\$22,805.14
DeKalb County	\$22,645.00
Fentress County	\$25,000.00
Goodwill Industries	\$20,705.40
Greene County	\$6,913.50
Hardin County	\$22,487.54
Henry County	\$19,059.60
Lewisburg, City of	\$22,400.00
Pickett County	\$25,000.00
Putnam County	\$4,088.69
Scott County	\$11,880.00
Smith County	\$10,176.00
Van Buren County	\$24,467.56
Washington County	\$24,024.00
Wayne County	\$25,000.00
TOTAL:	\$356,272.13

Appendix C: Rebate Awards Fiscal Year 2007-08

DAVIDSON COUNTY /Nashville	\$92,436.00	MONTGOMERY	\$26,997.21
BELLE MEADE	\$0.00	CLARKSVILLE	\$0.00
BERRY HILL	\$0.00	RUTHERFORD	\$32,329.00
FOREST HILL	\$0.00	EAGLEVILLE	\$0.00
GOODLETTSVILLE	\$2,572.00	LAVERGNE	\$0.00
LAKEWOOD	\$0.00	MURFREESBORO	\$0.00
OAK HILL	\$0.00	SMYRNA	\$0.00
RIDGETOP	\$0.00	SHELBY	\$15,648.50
HAMILTON	\$17,778.00	ARLINGTON	\$0.00
CHATTANOOGA	\$21,838.00	BARLETT City of	\$9,501.00
COLLEGE DALE	\$0.00	COLLIERVILLE	\$7,830.00
EASTRIDGE	\$2,780.00	GERMANTOWN	\$3,459.71
LAKESITE	\$0.00	LAKELAND	\$1,609.00
LOOKOUT MOUNTAIN	\$0.00	MEMPHIS	\$135,820.00
RED BANK	\$1,637.00	MILLINGTON	\$0.00
RIDGESIDE	\$0.00	SULLIVAN	\$11,184.00
SIGNAL MOUNTAIN	\$0.00	BLUFF CITY	\$0.00
SODDY-DAISY	\$0.00	BRISTOL City of	\$3,388.00
WALDEN	\$0.00	JOHNSON CITY	\$0.00
KNOX	\$50,005.00	KINGSPORT	\$0.00
FARRAGUT	\$0.00	WILLIAMSON	\$14,588.00
KNOXVILLE	\$39,706.00	BRENTWOOD	\$0.00
MADISON	\$38,758.00	FAIRVIEW	\$0.00
JACKSON City of	\$0.00	FRANKLIN, City of	\$3,042.50
MEDON	\$0.00	NOLENSVILLE	\$0.00
MAURY	\$24,933.94	SPRING HILL	\$0.00
COLUMBIA	\$0.00	THOMPSON'S STATION	\$0.00
MOUNT PLEASANT	\$0.00	WILSON	\$28,714.00
SPRING HILL *	\$0.00	LEBANON	\$0.00
		MT. JULIET	\$0.00
		WATERTOWN	\$0.00
		TOTALS	\$586,554.86

Appendix D: Waste Tire Recycling Grant Awards Fiscal Year 2007-08

ANDERSON CO.	\$51,500.40	LAUDERDALE CO.	\$12,499.90
BEDFORD CO.	\$29,499.40	LAWRENCE CO.	\$39,999.40
BENTON CO.	\$7,999.60	LEWIS CO.	\$7,939.40
BLED SOE CO.	\$4,858.70	LINCOLN CO.	\$29,038.80
BLOUNT CO.	\$75,000.10	LOUDON CO.	\$20,528.90
BRADLEY CO.	\$63,092.40	MACON CO	\$17,648.40
CAMPBELL CO.	\$28,800.10	MADISON CO	\$112,808.50
CANNON CO.	\$8,000.30	MARION CO.	\$18,316.20
CARROLL CO.	\$19,777.10	MARSHALL CO.	\$21,396.90
CARTER CO.	see Hub	MAURY CO	\$47,368.30
CHEATHAM CO.	\$18,999.40	MCMINN CO.	\$30,256.80
CHESTER CO.	\$8,764.70	MCNAIRY CO.	\$15,305.50
CLAIBORNE CO.	\$11,000.50	MEIGS CO.	\$0.00
CLAY CO.	\$4,000.50	METRO Lynchburg / Moore Co.	\$2,999.50
COCKE CO.	\$23,999.50	MONROE CO.	\$29,908.20
COFFEE CO.	\$36,999.90	Montgomery HUB/ Stewart	\$94,999.80
CROCKETT CO.	\$7,000.00	MORGAN CO.	\$5,298.30
CUMBERLAND CO.	\$38,000.20	OBION CO.	\$17,619.00
DAVIDSON CO. / Metro Nashville	\$595,000.00	OVERTON CO.	\$15,609.30
DECATUR CO.	\$4,516.40	PERRY CO.	\$0.00
DEKALB CO.	\$10,125.50	PICKETT CO.	\$3,154.90
DICKSON CO.	\$32,231.50	POLK CO	\$11,404.40
DYER CO.	\$25,884.60	PUTNAM CO.	\$33,733.00
FAYETTE CO	\$14,371.70	RHEA CO.	\$15,675.80
FENTRESS CO	\$15,500.10	ROANE CO.	\$29,099.00
FRANKLIN CO.	\$29,999.90	ROBERTSON CO.	\$35,000.00
GIBSON CO.	\$39,999.40	RUTHERFORD CO.	\$149,305.80
GILES CO.	\$20,797.70	SCOTT CO.	\$7,000.00
GRAINGER CO.	\$5,392.80	SEQUATCHIE CO.	\$11,999.40
GREEN CO.	see Hub	SEVIER CO. (Solid Waste, Inc.)	\$54,931.10
GRUNDY CO.	\$3,500.00	SHELBY CO.	\$516,999.70
HAMBLEN CO	\$51,749.60	SMITH CO.	\$15,590.40
HAMILTON CO.	\$280,000.00	STEWART CO.	see Hub
HANCOCK CO.	\$3,500.00	SULLIVAN CO	see Hub
HARDEMAN CO.	\$9,499.70	SUMNER CO. (Resource Authority)	\$48,565.30
HARDIN CO	\$29,837.50	TIPTON CO.	\$29,617.70
HAWKINS CO.	\$20,794.20	TROUSDALE CO.	\$5,320.70
HAYWOOD CO.	\$13,942.60	UNICOI CO.	see Hub
HENDERSON CO.	\$15,972.60	UNION	\$11,000.50
HENRY CO.	\$24,122.00	VAN BUREN CO.	\$0.00
HICKMAN CO.	\$12,600.70	WARREN CO.	\$29,995.00
HOUSTON CO.	\$6,199.90	Washington HUB/ Sullivan,Johnson,Unicoi,Carter,Greene	\$243,635.00
HUMPHREYS CO.	\$12,675.60	WAYNE CO.	\$0.00
JACKSON CO.	\$6,609.40	WEAKLEY CO.	\$17,646.30
JEFFERSON CO.	\$15,843.10	WHITE CO.	\$18,000.50
JOHNSON CO.	see Hub	WILLIAMSON CO.	\$100,884.70
KNOX CO.	\$453,238.10	WILSON CO.	\$40,999.70
LAKE CO.	\$0.00	TOTAL	\$4,160,297.40

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